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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/508,866	07/14/2000	MARTIN HOTTNER	FA/175A	4070

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EXAMINER

BEFUMO, JENNA LEIGH

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 06/05/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/508,866

Applicant(s)

HOTTNER, MARTIN

Examiner

Jenna-Leigh Befumo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 and 29-83 is/are pending in the application.
- 4a) Of the above claim(s) 81-83 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-17 and 29-80 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- ☐ Interview Summary (PTO-413) Paper No(s). ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

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DETAILED ACTION

1. Claims 18 – 28 are missing from the Application provided by the PCT Office. Therefore, the claims examined in the following Office Action are claims 1 – 17 and 29 – 83. The Applicant can submit the missing claims in a future amendment, by adding the claims starting with claim number 84.

Election/Restrictions

2. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claims 1 – 80, drawn to a multi-layered laminate which forms a seam with a substrate layer or a second multi-layered laminate.

Group II, claims 81 - 83, drawn to a method of sealing a pinhole in a waterproof laminate.

3. The inventions listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: the laminate recited in Group II is not required to have a two-component textile layer with specific temperature limitations as required in Group I. Therefore, the claims do not relate to a single inventive concept.

4. During a telephone conversation with Carol Lewis White on May 28, 2002 a provisional election was made with traverse to prosecute the invention of Group I, claims 1 - 80.

Affirmation of this election must be made by applicant in replying to this Office action. Claims 81 - 83 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

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Double Patenting

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 1, 9 – 17, 29 – 33, 36, 37, 45 – 58, 61 – 69, and 71 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 35 – 39 and 64 – 91 of copending Application No. 09/308544. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims in 09/508866 include a laminate comprising a first layer with bicomponent fibers comprising a propellant material and a functional layer joined to a substrate layer at a seam, which encompasses the claims set forth in claims 35 – 39 and 64 – 91 of this Application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Specification

7. The disclosure is objected to because of the following informalities: It appears that the term "0,13 bar" should read "0.13 bar" instead.

Appropriate correction is required.

Claim Objections

8. Claims 10 and 46 are objected to because of the following informalities: The phrase the second "component is meltable at a temperature" is grammatically awkward. It is suggested that the Applicant recites that the second component *melts* at a temperature. Appropriate correction is required.

9. Claim 55 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim, or amend the claim to place the claim in proper dependent form, or rewrite the claim in independent form. Claim 55, which depends from claim 54 recites that the second component is polyamide 6.0, while claim 54 recites that the second component is polyethylene. Since polyamide 6.0 is not a type of polyethylene, claim 55 fails to further limit 54.

10. Claim 78 is objected to because of the following informalities: The width of the seam is recited as being less than 025cm instead of 0.25cm as recited in similar claims and in the specifications. For purposes of examination it is assumed that the decimal is missing and the seam is less than 0.25cm. Appropriate correction is required.

Claim Rejections - 35 USC § 112

11. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

12. Claims 11, 15, 32, 47, 50, 53, 59, 60, and 67 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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13. The phrase "the first component is stable to temperature of at least 140°C" in claims 11 and 47 is indefinite. Does the Applicant mean that the "first component" will not degrade or decompose below 140°C? Or instead, does the Applicant mean that the "first component" will not switch phases by melting or evaporating below the recited temperature.

14. The phrase "polyolefins including polyethylene and polypropylene" in claim 15 is indefinite. It is unclear if the Applicant is claiming all polyolefins or only claiming the two specific types of polyolefins, i.e., polypropylene and polyethylene, which are listed. Claims 32, 50, 53, and 67 are similarly rejected.

15. The phrase "the second component is a blend of yarns" in claim 59 is indefinite. It is unclear what is blended together to form the second component. Are the yarns made of different materials, so that there is a third component in the textile layer as well as the first and second material? Or, are yarns which are composed only of the second material plied or twisted together to form a yarn? What is the structure of the "blend of yarns"? Claim 60 is rejected due to their dependence on claim 59.

Claim Rejections - 35 USC § 103

16. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

17. Claims 1 – 17, 29 – 54, 56, 57, and 61 – 80 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 03-174051 (Derwent English Abstract and PAJ English Abstract) in view of Gore et al. (4,194,041), Richmond et al. (3,100,926), and DE 4244731 A (English Abstract).

JP 03-174051 teaches using a foamed fiber to create a woven, knit, non-woven or net-like structure (PAJ Abstract). The foamed fiber can be a sheath/core, multicore/sheath, multilayered,

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or a radial multilayered conjugate fiber where one component is an expandable component and one component is a fibrous component (PAJ Abstract). The fiber is latent expandable, in other words, the fiber can be expanded after it has been formed into a fabric (PAJ Abstract). Finally, JP 03-174051 discloses that the foamed fabric can be used in protective material of water resistant clothing or bedding used in winter seasons, skiing or fishing (Derwent Abstract). JP 03-174051 fails to teach using the foamed fabric in combination with a functional layer.

Gore et al. is drawn to waterproof garments used in protective clothing (abstract). Gore et al. discloses creating a waterproof and breathable layered article by adding a hydrophilic layer and a hydrophobic layer such as expanded PTFE to an article (column 4, lines 55 – 65). Gore et al. discloses the layered articles produce can include textile layers and be used in outerwear such as down jackets and sleeping bag shells (column 5, lines 39 – 54). Therefore, it would have been obvious to one having ordinary skill in the art to add a functional breathable, waterproof layer to the outerwear fabrics produced by the foamed fabrics taught by JP 03-174051 to improve the water-resistance of the fabric while allowing the fabric to remain breathable. Further, the PTFE layer would also help to improve the wind resistance of the fabric.

JP 03-174051 discloses making garments from the expandable fabrics. Garments made from the expandable fabrics laminated to the functional PTFE layer would inherently have seams. A garment made from the expandable fabric laminate described above, would produce a four-layered laminate at the seam location comprising a first expandable fabric layer, a first functional layer, a second expandable fabric layer and a second functional layer. JP 03-174051 fails to teach producing waterproof seams. DE 4244731 A discloses using expandable threads to sew together sheets of materials to produce water-resistant seams without the use of sealants of

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other film layers (abstract). The expandable thread produces seams with good water-tightness and adhesion. Thus, it would have been obvious for one having ordinary skill in the art to use expanding fibers as taught by DE 4244731 A to produce water-tight seams in the expandable fabric taught by JP 03-174051 since DE 4244731 A discloses that the expanding nature of the fibers fills the openings in the seams and makes the seams water-tight without the need for adhesives or additional film layers. Therefore, claims 1, 13, 14, 31 – 33, 36, 37, 49, 56, 57, 66, 67, and 68 are rejected.

JP 03-174051 fails to disclose specific materials used to create the foamed fiber.

Richmond is drawn to a method of producing foamed fibers. Richmond discloses that the foamed fibers can be made with a number of conventional thermoplastic resins such as polyvinyl chloride, polyethylene, and nylon (column 1, lines 58 – 60). The expandable component includes a blowing agent, which can be any conventional type of blowing agent used in expansion of thermoplastic resins including azo-dicarbonamide (column 2, lines 12 – 38).

Richmond discloses the specific blowing agent will be chosen based on the temperatures of the thermoplastic resins since the blowing agent should not decompose before it is extruded (column 2, lines 23 – 25). The conjugate fiber includes a fibrous portion to maintain the strength of the expandable fiber (column 3, lines 50 – 52). The fibrous portion can be nylon, rayon or synthetic materials which will not be destroyed by high temperatures (column 3, lines 54 – 58 and column 4, lines 63 – 65). Richmond teaches the blowing agent is activated at a temperature which will not degrade the other materials in the conjugate fiber, and that the fabric produced after the foaming agent has been activated has expanded threads that are permanently welded together (column 4, lines 1 – 25). Thus, it would have been obvious to one having ordinary skill in the art

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to use the thermoplastic components and the blowing agents taught by Richmond for the conjugate expandable fibers taught by JP 03-174051 since Richmond discloses how to produce latent expandable fibers which can be used to produce woven, knitted or other fabric articles. Further, it would have been obvious for one having ordinary skill in the art to use a first and second component with a melting temperature difference of greater than 20°C for the bicomponent fiber disclosed by JP 03-174051 so that the fibrous component will maintain the strength and integrity of the fabric when the material is heated to decompose the blowing agent and expand the fiber. Thus, claims 9, 12, 15, 17, 29, 30, 45, 48, 50, 52, 53, 54, 61, 63, 64, 65, and 71 are rejected.

Even though Richmond discloses using nylon as the first component, Richmond fails to disclose the specific type of nylon. The examiner gives Official Notice that Nylon 6,6 is known to be a high strength fiber which has a high resistance to heat. It would have been obvious to one having ordinary skill in the art to Nylon 6,6 as the first component, since Richmond discloses that the first component should maintain its strength and structure when heat is applied. Further, it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use. *In re Leshin*, 125 USPQ 416. Thus, claims 16 and 51 are rejected. Further it would have been obvious to one having ordinary skill in the art to choose a first component which is stable above 140°C since Richmond teaches that the first component material must maintain its strength and shape while the textile material is exposed to heat to bond the fibers and activate the propellant material. Therefore, claims 11 and 47 are rejected.

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Further, as taught by Richmond the components comprising the blowing agent can be conventional synthetic resins. Additionally, Richmond discloses that those synthetic materials must be softened to allow the fiber to expand and form permanent bonds with the adjacent fibers at the decomposition temperature of the blowing agent. Therefore, it would have been obvious for one having ordinary skill in the art to choose a synthetic resin with a melting temperature between 80°C and 170°C which would allow the fiber to maintain a solid state while it is in use in the end-product, while allowing one to choose blowing agents which decompose at lower temperatures and thus, save money by using less energy to decompose the blowing agent and prevent the other materials in the laminate from degrading due to high blowing agent decomposition temperatures. Therefore, claims 10 and 46 are rejected.

Additionally, it would have been obvious for one having ordinary skill in the art to choose a blowing agent with a decomposition temperature between the melting temperature of the first and second component for the expandable fiber taught by JP 03-174051, since Richmond discloses the blowing agents should decompose at a temperature at which the lower melting component is in a softened state to allow the fiber to expand and the higher melting component is still in the solid state to maintain the strength and structure of the fabric. Thus, claim 62 is rejected.

Although the limitations of seam water resistance, seam stiffness, seam shrinkage, seam elongation at break, transverse seam strength, and the water resistance of the laminate are not explicitly taught by JP 03-174051, DE 4424731, Richmond, or Gore et al., it is reasonable to presume that said limitations would be met by the combination of the two references. Support for said presumption is found in the use of similar materials (i.e. laminates comprising water

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resistant functional layers and foamable fibers) and in the similar production steps (i.e. forming a garment comprising a water resistant PTFE layer and using foamable fibers to form water tight seams) used to produce the water resistant garment. The burden is upon the Applicant to prove otherwise. Thus, claims 2 – 5, 7, 8, 34, 35, 38, 39, 41 – 44, 69, 70, 72, 74 – 77, 79, and 80.

Finally, JP 03-174051, DE 4424731, Richmond, or Gore et al. fail to teach the width of the seam. However, it would have been obvious for one having ordinary skill in the art to optimize the width of the seam to produce a seam which is strong enough to undergo the various stresses which will be placed on the seam during use as well as being thick enough to maintain a tight water seal, while keeping the as narrow as possible to maintain the fabrics flexibility and hand. Additionally, it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215. Therefore, claims 6, 40, 73, and 78 are rejected.

18. Claim 58 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 03-174051 in view of Gore et al., Richmond, and DE 4424731 A as applied to claim 56 above, and further in view of Fujimura et al.

The features of JP 03-174051, Gore et al. and Richmond have been set forth above. JP 03-174051 fails to teach a side-by-side conjugate fiber. Fujimura et al. is drawn to expandable conjugate fibers. Fujimura et al. discloses that the expandable conjugate fibers can be sheath/core structure or side-by-side structure (column 3, lines 12 – 15). Therefore, it would have been obvious for one having ordinary skill in the art to substitute side-by-side fiber structure for the sheath/core fiber structure taught by JP 03-174051 since JP 03-174051 suggests the fibers can have other configurations besides sheath/core, and Fujimura et al. discloses that

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side-by-side fibers can be produced with expandable conjugate fibers. Further, the side-by-side structure would produce fibers with more crimp and thus a fabric with more bulk after the fibers are expanded which would improve the hand and aesthetic properties of the fabric. Therefore, claim 58 is rejected.

19. Claims 59 and 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 03-174051 in view of Gore et al., Richmond, and DE 4424731 A as applied to claim 37 above.

JP 03-174051 discloses the expandable foaming fibers can be long or short fibers (Derwent Abstract). Short fibers or staple fibers are produced into yarns by spinning together multiple staple fibers. Thus, it would have been obvious for one having ordinary skill in the art to produce yarns with multiple staple strands since spun yarns made from staple fibers have greater bulk and feel more like yarns made from natural fibers. Thus, claims 59 and 60 are rejected.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jenna-Leigh Befumo whose telephone number is (703) 605-1170. The examiner can normally be reached on Monday - Friday (9:00 - 5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (703) 308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.


Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

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Jenna-Leigh Befumo
June 3, 2002

A handwritten signature in black ink, appearing to be 'JLB' or similar, written in a cursive style.A handwritten signature in black ink, appearing to be 'C. Juska', written in a cursive style.

**CHERYL A. JUSKA
PRIMARY EXAMINER**